Observations Pertaining to Examiners' Duties and Their Actions

WITH

Particular Reference to Rules 65 and 66

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BY

JAMES H. COLWELL,
Principal Examiner, Division Twenty-two,
U. S. Patent Office.

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Principal Examiner, Division Twenty-two,
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The foundation of the present patent laws is the examination system, and the results that have been achieved are in large part due to that system.

The commercial and practical value of an invention, not infrequently hinges, and is dependent upon the careful preparation of the application papers, and the skilled prosecution of the case by the applicant, or his attorney on the one hand; but, on the other by an exhaustive and thorough search of the accessible art by the Patent Office. The first is beyond direct office control; the law, however, not only imposes upon the examining corps, in each individual case, the duty of exhausting every means at its disposal to protect the public, and give real value to a patent, by placing on the record the known art at its command; but also when an Examiner, by his experience and knowledge of the art, sees the real merits and novelty of the invention, it is due to an applicant to make any proper and legitimate suggestions that will expedite the prosecution of the case, and will aid him in securing adequate protection. A strict adherence to the requirements of the Rules of Practice by the examining corps in the examination of cases, would, to a large extent, lessen and alleviate the many evils and troubles which are multiplied by lack of proper office facilities, and insufficient force, while, at the same time, it would greatly aid an inventor who is honestly desirous of securing a patent for a practical and meritorious invention.

Compliance with Rule 68 on the part of the applicant, or his attorney, in the majority of cases, if honestly attempted, would tend to the rapid disposal of cases without unnecessarily burdening the record. Yet, the fact that by reason of ignorance, or deliberate purpose, a few applicants, or their agents, will take advantage of every technicality which the liberal patent laws allow to delay the prosecution, by confusing the record, and befuddling, and worrying the Examiner by all manner of irrelevant, and immaterial amendments and objections, should not influence the Examiner to adopt the graver, and even more fatal and reprehensible error of non-compliance with what the law requires of him irrespective of any annoyances, and obstructive tactics he may be subjected to. With this class of cases, the Examiner being only human, is frequently tempted to come back in like tenor, and thus involve himself in endless argument and controversy, which in no way leads to a quick disposal of the case, but merely overloads the record with foreign matter. The adoption of this course, and we are all at times liable to it, is the narrow and prejudiced road to take, resulting only in the long run in loss of patience, and the prolongation of the prosecution, with the ultimate consequence of imposing on the Examiner unnecessary labor and loss of time.

Neglecting entirely the question, whether an applicant, or his attorney, does, or does not comply strictly with the requirements of the rules, ignorantly or otherwise, it is an Examiner's duty, as well as the easier way in getting results, to follow the rules fully. By so doing, the total number of actions will be correspondingly reduced.

From experience in six or seven divisions in dealing with very differing arts, I am convinced that no one, whether an Examiner or not, is competent to express a correct ex parte opinion on a claim related to an art with which he is unfamiliar. Claims which apparently amount to nothing, and the subject-matter thereof obvious, have an entirely different significance to one conversant with the difficulties to be met and overcome to attain a much desired result sought in the art to which the device relates.

The question of patentability, when it comes before the court is entirely different from the question presented before the Principal Examiner, or the Examiners-in-Chief in a case pending in the office.

In an infringement suit the court has the benefit of testimony, as to the commercial and practical advantage and value of the device involved, based on the adoption and use of it, and the case is presented before the court fully and in detail, and from all angles by skilled lawyers, and practical and theoretical experts in the art on both sides of the issue. Thus the court is able to judge intelligently, for example, whether or not a patentee with a mere paper patent for an undemonstrated, and apparently practically worthless machine is endeavoring to stifle the efforts of real and meritorious inventors and exploiters.

In answering an appeal, the Examiner does, or should cite the best art at his command, and should clearly set forth his reasons. In doing this, he can not possibly foresee, in many cases, what line of argument an applicant may take. On no few occasions it has been found that details, elements, and structural features, all of which are more or less of common knowledge in a particular art, and for that reason have never been discussed, except inferentially, in the prosecution of the case, are seized upon by counsel for applicant in his brief and argument, which would be immaterial if the Board were conversant with what is old and common in the art. The members of the Board obviously can not be familiar with, or have the knowledge of the real difficulties to be overcome, nor discriminate between what is vital, and what is merely superficial, in the numerous arts, classified in forty-three different divisions of the Patent Office. The Examiner, fortified with the individual knowledge and experience of his assistants, is better able to pass upon questions of patentability. At least, he should be better able, if he is entitled to be in charge of the work entrusted to him.

For this reason I am convinced, and, although I may be treading on delicate grounds, I am strongly of the opinion that the Examiners-in-Chief should be extremely careful, when affirming a rejection of the Primary

Examiner, in suggesting a claim as patentable without familiarizing themselves in some way with what may be a matter of common knowledge, and therefore immaterial so far as real and actual novelty is concerned.

In the treatment of an application, and as governing the Examiner's action, the most important and far-reaching rules in influencing the expeditious disposal of the case, are Rules 65 and 66.

Rule 65 provides:

> "Whenever, on examination, any claim of an application is rejected for any reason whatever, the applicant will be notified thereof. The reasons for such rejection will be fully and precisely stated, and such information and references will be given as may be useful in aiding the applicant to judge of the propriety of prosecuting his application or of altering his specification; and if, after receiving such notice, he shall persist in his claim, with or without altering his specification, the application will be reexamined. If upon reexamination the claim shall be again rejected, the reasons therefor will be fully and precisely stated."

Rule 66 provides:

> "Upon the rejection of an application for want of novelty, the Examiner must cite the best references at his command. When the reference shows or describes invention other than that claimed by the applicant, the particular part relied on will be designated as nearly as practicable. The pertinence of the reference, if not obvious, must be clearly explained and the anticipated claim specified," etc.

A departure from these rules in the early Office actions is often the source of numerous future troubles, and it is not going too far to state that fully 10 to 20 per cent of useless labor is due to this cause.

The importance of these rules should be one of the first things to be impressed on a newly appointed as-

sistant examiner. It would be greatly to the ultimate benefit, and welfare of the Patent Office, if some uniform scheme, or system could be devised, and adopted for imparting elementary instruction in the rudiments of office organization, and procedure, on his first entering the examining corps.

When a new assistant, and we have all been there, is assigned to a division, it should be remembered, and it is natural, that he is almost sure to have certain preconceived ideas, and opinions of invention and patents, which are erroneous, both as to law and fact. Some are in time overcome, others never completely, and it may be seriously doubted whether with any of us, the personal equation is ever entirely obliterated, however we may think so.

The almost universal practice in the various divisions, of putting a new assistant on examining work immediately, or within a week, before he has gotten his bearings, and when he does not yet recognize the distinction between a pending application, and a patent, or that between an interference proceeding in the Office, and an infringement suit in the courts, is obviously wrong. It is unfair to the assistant, and to the Office itself. A plan more effectual, expeditious, and satisfactory, so far as the real advancement of the work is concerned, would be to assign him to the clerk's desk, for at least six weeks, to assist in entering amendments, and the many duties daily attending that desk, in order to familiarize him with the rules applicable thereto, and the various clerical divisions of the Office, their jurisdiction, functions, and interconnecting relations, and at the same time to enable him to gain a working knowledge of the filing of the various papers in an examining division, as well as a general idea of the system of classification as practically demonstrated by the classes, and subclasses in his division, with which he will have to deal later on. With such a preliminary training, it is obvious that a new assistant could much more readily and intelligently take up examining work, than if he started in entirely in the dark and in complete ignorance of his duties, and of the Office procedure. The present general custom obviously must have a ten-

dency to create and implant in the mind erroneous ideas and impressions, which once adopted, it will be found extremely difficult, if not impossible, to eradicate.

A new assistant may be apt, bright, intelligent, and possibly brilliant; but before he recognizes clearly the distinction between abandonment, combination, division, forfeiture, renewal, revival, etc., he, not infrequently with the idea that it is a little above the dignity of his position to familiarize himself too intimately with the clerical and general Office work, proceeds to begin at the top and wrong end of the line, by diligently applying himself entirely to complex court decisions, hinging upon specific features and intricate points of law; with the result, that without necessary experience and elementary knowledge of patent law, he forms wrong impressions, and becomes imbued with the idea that orders, amendments, and purely Office matters are unimportant in themselves, and will be attended to by someone else. In this connection, I am firmly of the belief and opinion (and I do not think the statement is open to contradiction) that the value of the services of a competent and experienced examiner's clerk, if she, or he is up to the work of the desk, and has intelligent discrimination and judgment, can not be overestimated, and is most difficult to replace satisfactorily.

The first thing the average assistant can be relied upon to learn is how to dispose of a case by some short and expeditious route, without involving the apparent loss of time, which an exhaustive search of the art in the first instance necessarily involves. With this view, he takes up successively the question of getting the case transferred to another division, requiring division or rejection on the grounds of aggregation and lack of invention. The non-success of all these methods finally results in making necessary an examination of the art.

In rejecting a claim on the ground of aggregation, it is an easy matter to arm, and equip oneself with a vast array of decisions and authorities, that aggregations are not patentable, losing sight of the real question, whether, in a particular case before him, the claim is an aggregation, or a proper combination, though perhaps involving a mere substitution of one well-known equivalent for another.

Not infrequently, when a specification with the drawings are badly prepared, and confused, with claims extremely broad, vague and indefinite, the temptation is strong for an Examiner to make a general action, stating that the application is informal, unintelligible, and objectionable throughout, and thereupon to select one or two references which meet in terms the claims, and reject them. Such an action obviously does not in the slightest degree tend to advance the prosecution, but merely delays it. Many times, in cases of this kind, an Examiner through his knowledge of the art, but at the expense of some patience and a little time, can, by a careful reading of the specification in connection with the drawing, gain a complete understanding of the general features of the invention, and what it is intended to accomplish, and thereby be able to point out the particular part on which further information is necessary. At the same time he may intelligently search the nearest art, and consequently be able to reject the claims on the best references in the first action.

If a hasty action is made, the case, sometimes at the end of the year limit, comes back amended, not in the details as to which information is really needed, or with properly drawn claims, with the result that it will have to be examined precisely as if it were newly filed. New references will have to be cited, and another action made of record. So the prosecution is dragged, and continued, with the consequent delays, and possible interferences, until it is allowed or finally rejected; when the same result could have been attained with half the correspondence, if the first action had been as complete and thorough as possible.

When a specification is badly written, vague, and so indefinite as to make it impossible to act intelligently on the claims, it should not be objected to in its entirety, but the particular parts, and the operations thereof, on which further information is desired, and necessary, should be distinctly pointed out, thereby enabling an applicant to amend intelligently, and responsively, to the Office requirement. Sometimes, when this is not done, the applicant, or his attorney, intentionally or ignorantly, will make long amendments, with explana-

tions of features, which are perfectly obvious to the Examiner, while maintaining strict silence on the real and vital portions.

In each Office letter, every claim should be designated by number as allowable or rejected, and each reference should be cited by number as well as name, together with the class. A general rejection should not be made, such as stating that the claims are rejected on the references of record, or Smith and Jones of record. A great many future difficulties would be avoided if the words "of record," when used unqualifiedly in the rejection of claims, could be obliterated from the Patent Office vocabulary. On one occasion within the personal knowledge of the Examiner, an appealed case, which had been inherited from another division, and had never been acted upon in the new division, came up for action. The case originally contained a great number of claims, and had been amended many times, with the result of many changes in the numbering of old claims. On starting to answer the appeal, it was found that the claims were rejected on the references of record. On going back over the Office letters in an endeavor to find what references applied to certain claims, the same statement occurred throughout, with additional references added from time to time, and there were about fifty cited. After spending the greater part of a day in trying to find out what were the particular references, or combinations thereof, relied upon to anticipate the claims finally rejected, the attempt was given up in despair, and the applicant was informed that the appeal was premature. The claims were then rejected individually, the referneces applied, and the applicant informed why the references anticipated the claims. In the next action, the rejected claims were canceled and the case passed to issue.

Frequently a number of rejections are made on references which apparently meet the claims in terms, the applicant denying the pertinency of the references, or perhaps slightly amending, and the Examiner reiterating his rejection until finally the Examiner finds, by carefully reading the references and fully understanding them, that he was in error in rejecting some of them, and the

case is disposed of either by the Examiner withdrawing the references, or the applicant canceling the rejected claims, which could have been done previously with far less actions, if a little time had been devoted to the study of references before the first action.

Consideration of rejection on the ground of lack of invention, brings up the constantly recurring question of what is invention? After reading numerous court decisions based on specific cases, many of which have been quoted in previous lectures, and after searching the various authorities on patent law for a clear definition of this simple ground of rejection, I am forced to come to the conclusion that no definition exists and none ever *will* be formulated which will be an infallible guide in determining the question in each specific instance in any one of the numerous arts; and the same is true of aggregation.

If any one will discover, and give an accurate definition to guide the Patent Office in determining absolutely, and infallibly, by thumb rule, what this nebulous thing, invention is, its labors will be greatly reduced.

There are many authorities and decisions to the effect that a mere change of configuration, shape, or dimensions, is not patentable. While broadly this is true in the majority of cases, yet, if it were literally adopted, as an axiom, many inventors would be denied the protection which the patent laws are designed to afford for devices which may be of inestimable practical value and worth. Admittedly, it is obvious, and indisputable, that a mere change of form, or dimension in a structural feature which acts in the same manner, and produces the same result as in prior devices, without any new function, or unforeseen effect, is not patentable, and in fact, amounts to no more than the substitution of an equivalent.

Possibly it may not be a waste of time, and may be to a slight degree interesting to a few to refer in a general way to several patents illustrating the development of an art in which the question of invention hinged upon form, dimension, and apparent aggregation. If the rule held in all cases, that such changes do not involve patentability, many most valuable improvements in the

class of projectiles would never have been patented. Previous to 1905, it was apparently settled that a small arm projectile with a modern rifle, to have long flight, and penetration, must be pointed, but is was the opinion of experts that a short pointed head was a requisite. In other words, the pointed portion must be one-fourth or less, of the total length, because a long point would affect, and interfere with the ballistic qualities and spin, or rotation, causing the bullet to wabble, or tumble in flight, and thus destroy its accuracy.

With the object of increasing the range and penetration, Arthur Gleinich, a German engineer, applied for a patent for a bullet designed for use in small arms at high pressures and great velocities. Photographs of projectiles in flight at different velocities indicated the pointed nose as productive of the most desirable form of head wave for projectiles at high velocities, but it was apparent that any conclusion based thereon must be qualified by other requirements and conditions present as to flight, range, penetration and stopping effect, and these could only be satisfied by a proper construction of body, dimensions, distribution of mass, and form of body and head. Gleinich's experiments led him to the conclusion that a much longer pointed head than the one universally in use was necessary, and that the form for velocities in excess of 500 metres per second was one in which the head constituted about one half the total length. His bullet, in the language of claim 3 of his patent, is described as follows:

> "A projectile having a pointed head of substantially one-half the total length of the projectile, curved upon a radius of four to nine fold the caliber."

In the early prosecution of the case, the Examiner failed to see any invention. He held that the device involved a mere change of form in the then existing bullet in common use. But after the filing of affidavits, voluminously setting forth in tabulated form the result attained in actual experiments with bullets, and showing the almost phenomenal increase in efficiency, as to range and penetration, amounting to from 15 to 25 per cent over that of the old form when used under similar

conditions, with the same explosive charge and type of fire arm, the Examiner reconsidered his action and patent 841,861, was granted January 12, 1907. Gleinich's contention and the practical value of his bullet were abundantly proved by its adoption by every civilized government and its use almost exclusively for big game hunting.

Of two engaged forces armed with the same rifle, one using the Gleinich bullet, and the other the old bullet, the former would be able to do effective execution at distances which would be beyond the range of the latter, who for all practical work, might just as well be armed at such ranges with spears or wooden guns.

Another device which has been equally far reaching in results, and in which the inventor's claim and contentions have been fully sustained by its universal adoption, is the projectile covered by patent No. 541,280, granted June 18, 1895, to E. M. Johnson of New York, on an application filed March 30, 1894, for an armor piercing projectile with a detachable soft nose cap. Johnson, in common with all ordnance experts, knew that the best form for an armor piercing projectile for flight and penetration was the conoidal pointed projectile in common use. But he found by experimenting and examining projectiles after firing, that as the hard point of a projectile strikes the surface of modern surface hardened armor, the point of the projectile becomes "upset" by the blow at the moment of impact, and thus loses the power of penetrating the softer metal underlying the hardened exterior. Reaching this conclusion, Johnson reasoned that if this upsetting of the hard point at the moment of impact with the hard surface of the armor plate could be avoided, and the shape of the point sustained and kept intact while piercing the hardened surface, then the projectile would penetrate the underlying softer metal and completely pierce the plate, so that if it were of explosive character it would have reached the point where it would do the most effectual damage prior to bursting or explosion.

Johnson's invention consisted in the simple expedient of enclosing the pointed end of the projectile in a soft metal, blunt, and solid ended nose cap. This at first sight appeared to experts to be fallacious and an apparent paradox. Its effect apparently would be to negative the

advantages of the pointed head in decreasing wind resistance, and seriously to interfere with the flight and trajectory, as it would undoubtedly be productive of an undesirable head wave; the very objection that the adoption of the conoidal head was intended to obviate. The Patent Office at first took this ground and rejected the claims for that reason, in connection with the art as it then existed. Johnson, however, by affidavits, supported with experiments, and notwithstanding the admitted objections, established the fact to the Examiner's satisfaction, that the employment of the blunt soft-nosed projectile secured a great increase in penetration over the non-capped projectile when fired under exactly similar conditions.

Having secured the best form for flight, and with a soft blunt nosed cap, getting the best penetration, the next thing to do was to combine both these features without counteracting the good qualities of either. To accomplish this result, Cleland Davis designed a hollow projectile contour cap, and filed an application April 21, 1908, resulting in patent 954492, granted January 4, 1910. His invention is described in the following language:

> "It is now well known that there is a certain contour, or taper, which when given to the exterior of projectiles, causes them to meet with a minimum resistance from the air; and it is equally well known that this particular contour, or taper is not the best adapted for armor piercing qualities. In other words, if a projectile is given the best shape for piercing armor, it will not meet with a minimum air resistance during flight and if it is given the best shape for cleaving the air, it will not possess its best armor piercing qualities.
>
> "My invention accordingly consists in providing a standard armor piercing or other projectile with a contour cap, which will during flight, give the projectile as a whole that contour best adapted for penetrating the air, and which upon impact is destroyed, thereby leaving the projectile with its best armor piercing contour unimpaired."

When Davis entered the field every element was separately, and in part combination, old. During the *ex parte* prosecution of the case, which was most diligently and persistently carried on by the applicant, the Examiner being impressed with the marked results attained, allowed claims for the three features in combination, and for the specific form of hollow contour cap per se. The Davis application, during its pendency in the Patent Office became involved in interference with a copending application which resulted in priority being awarded to Davis. The losing party acquired the rights of the Davis application, and subsequently to the grant of the patent, a rival company of the assignee was awarded a contract for furnishing several hundred thousand projectiles, the construction of which admittedly infringed the Davis patent. A suit was brought against the infringing company, decided September 10, 1914, in Firth Sterling Steel Co. *vs.* Bethlehem Steel Co., 216 Fed., Rep., 753.

It is not thought inappropriate, and it may be instructive to quote a few extracts from this decision, as illustrating the court's line of reasoning, and the stand taken in sustaining a patent for a construction seemingly obvious to the average person unacquainted with the difficulties to be overcome, when the patent was attacked on the old ground of aggregation and lack of invention. The court stated:

> "The type of projectile involved in the present discussion is the armor piercing projectile. If the doctrine that preparedness for war is a preservative of peace holds good, the inventive genius of the nation should be given every stimulus to apply itself in the direction here indicated. The history of the development of the art is in itself not uninteresting and throws light upon the points in controversy.
>
> "The contest between armor piercing projectile producers and armor plate manufacturers is an approach to the old one between resistless force and immobility. The advance made by the armor plate makers made the task of the projectile designer include the achieving of two necessary results. The projectile must both reach the plate and pierce it. It must reach it to pierce it, and

must therefore have the property of long flight. It must pierce it when reached, and must therefore be given the greatest possible power of penetration. The property of prolonged flight was early found in contour of form, and could be reproduced at will. To overcome the tendency of the sharp point to upset or break, and thereby secure the greatest penetration, the Johnson soft nose cap, or jacketing the point was adopted. Thus to recapitulate, we had the contour of shape for length of flight known. We also had the property of fullest penetration secured. We had, however, no practical combined result, because the use of one of these known things was either to prevent or render futile the use of the other. No effective shot could as yet be fired, because if the flight contour was given the projectile, it would reach the mark, but would not do its work when there, and, if the penetrating device was employed, it could not do its appointed task because it would not reach its mark. The flight contour and penetrating form, although alike essential and required to be both potentially existing in the projectile when inserted in the gun, did not function simultaneously but successively. The one began where the other ended. If, therefore, a temporary flight form could be given the surface contour of the projectile which would inhere until the mark was reached, and would then be automatically discarded to make way for penetration form, the problem would be solved. There were two seemingly obvious means of its accomplishment. The one was to give to the enveloping metal which made penetration effective the form contour, which lengthened the flight. The other was to supply contour flight form by means of a hollow enveloping cap or casing which would be destroyed on impact. The seemingly obvious, however, is seldom true. Devices to accomplish the required result were tried, and the problem remained still unsolved. The solution was finally found which embodies the claims of the patent in suit. That it was at once attended with commercial suc

cess is undoubted. The failure of the solid form of point encasing metal was avoided by abandoning its use. The cap which failed was one which inclosed the naked point of the projectile proper. Its failure was escaped by the simple expedient of retaining the soft metal nose feature within an enveloping shell or cap having the required flight contour. The design had inventive merit. Its merit is in a happy combination which produced the required result.

"To deny to the Davis design, the merit of combination, as defendant's argument essays to do, is to refuse to follow the very definition of patentable combination. Most of the elements, indeed it may be said all the elements, except the idea of the combination itself, may be said to be old. Herein, however, lies the novelty, as well as the utility, and the consequent merit of what was accomplished. The aggregated elements were contour of flight, penetrating shape, supporting nose cap. Merely putting together these old elements produces at most the aggregated functions of them all. Bringing them into the contact of a mere aggregation may indeed destroy the operation of some of the elements considered separately, but the aggregated results can be no more than the sum of all. Its full product is a mathematical addition. A true combination produces a new and different, at least in the sense of an additional, result. The Davis device uses these old elements in a novel combination, not only were these elements, taken separately, old, but the idea of the combination was itself old. The failure of each of these attempted combinations consisted in the loss of function which the elements separately had. The flight function was retained, the ballistic quality was lost. The solid pointed soft nose doubtless failed because the mass of metal in front of the point destroyed its supporting function by crowding the metal which supported the point. The thought which saved the day was the simple one of combining with the other elements, not the hollow-nosed cap with the naked point of the projectile proper

> but with the nose as well as the point. It is the simplicity of the combination which makes it look like mere aggregation. The Army and Navy experts had applied themselves to the task of doing just what Davis has done and failed. The prior art disclosed a cavity cap, into which the naked point of the projectile penetrated. It was able to show a projectile proper, in which the point was behind and surrounded with soft metal. It possessed no projectile as a whole in which there was interposed soft metal between the point and the cavity. In consequence, the Examiner allowed claims for the last and disallowed those for the first. He also disallowed claims for devices in which the soft metal was around, but not in front of, the point."

The Commissioner recently remarked that there were many persons, lawyers as well as laymen, who, while admitting the past usefulness of the patent system and its influence in the wonderful development of labor saving devices, and its consequent phenomenal effect on the country's industries, yet are sincere in their opinion that the present day conditions demand the substitution of a registration system. It, therefore, behooves every believer in the examination system, and especially those in this Office, conscientiously and impartially to carry out the duties imposed on them by law, and give every possible and legitimate aid to an inventor. If the time ever arrives in the future, when the general public, rightly or wrongly, views with suspicion the system, and believes that the Patent Office is antiquated, does not meet present conditions, that the examination is superficial, and that the grant of a patent is merely nominal, amounting to "a mere scrap of paper," then Congress, which is entrusted with enacting legislation for the public welfare, will seriously consider the question of abolishing the examination system. It will then be too late for the friends of this Office, by argument and reasoning, however well founded or based, on what the system has done for the public as well as individuals, to stay the tide of public opposition.

March 25, 1915.